

Scope of Claim

1. A corrosion resistant metal made thermal type mass flow rate sensor characterized by being equipped with a sensor part (1) comprising a corrosion resisting metal substrate (2) and a thin film (F) forming a temperature sensor (3) and a heater (4) mounted on the rear face side of the fluid contacting surface of the said corrosion resistant metal substrate (2).
2. A corrosion resistant metal made thermal type mass flow rate sensor as claimed in Claim 1 wherein a sensor base (13) equipped with a sensor part (1), a fluid inlet to make fluids flow in, a fluid outlet to make fluids flow out, and a body (21) equipped with a flow passage for communication between the fluid inlet and the fluid outlet are connected, and a strain applied to the said sensor part (1) when fastening a metal gasket (27) is suppressed by relatively raising stiffness of the material immediately thereupon against the said metal gasket (27) to secure hermeticity.
3. A corrosion resistant metal made thermal type mass flow rate sensor as claimed in Claim 1 or Claim 2 wherein a corrosion resistant metal substrate (2) is formed with thickness of less than 150 μ m.
4. A corrosion resistant metal made thermal type mass flow rate sensor as claimed in Claim 1 or Claim 3 wherein a sensor base (13) equipped with a sensor part (1) installed to secure hermeticity and a corrosion resistant metal substrate (2) are fastened hermetically by welding.
5. A corrosion resistant metal made thermal type mass flow rate sensor

as claimed in Claim 1, Claim 2, Claim 3 or Claim 4 wherein a thin film (F) is constituted by and insulation film (5) formed on the rear face of the fluid contacting face of the corrosion resistant metal substrate (2), a metal film (M) to form a temperature sensor (3) and a heater (4) formed thereupon, and a protection film (6) to cover the insulation film (5) and the metal film (M).

6. A fluid supply device wherein a corrosion resistant metal made flow rate sensor is employed characterized by a corrosion resistant metal made thermal type mass flow rate sensor claimed in either one or more of Claims 1~5 inclusive being mounted on a fluid controller, to check the flow rate appropriately at the time of the fluid control.